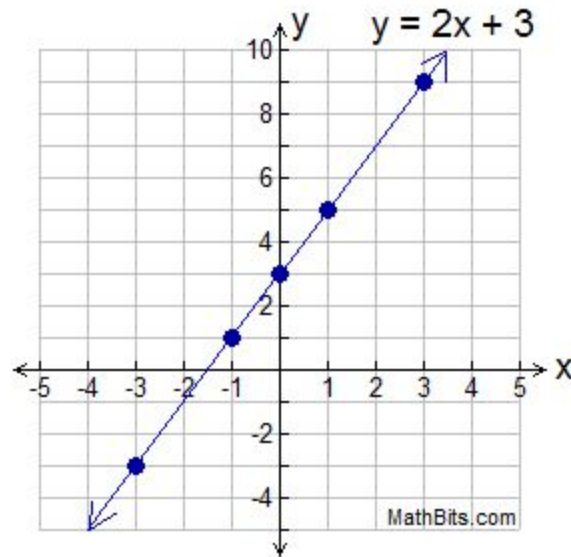


## Systems And Problem Solving Part 4

By Thomas Park



This graph represents a linear equation.

A linear equation involves a relationship between the x and the y variables that remains constant at all times.

If “x” is the variable pertaining to time, then, as time moves forward, the “y” variable increases or decreases at the same rate over time.

Linear equations are easy to predict-- to find the “y” variable, a person just has to project forward or ahead enough in the same way. They may not, technically, be “closed” systems, but I would call them systems that are “in control”.

For example, if a disease was progressing at an exponential rate, that would probably be worse than if it was progressing at a linear rate.

This may be because the “y” variable is not affected in a compounded way (ie, the values aren’t changing faster and faster, for example).

Math can have a lot of practical analogies and applications, but I generally would rather have to deal with an resolve a situation that involved a linear relationship than an exponential one.

Theoretically, an exponential relationship could me made linear if the y variable was prevented from affecting itself in different ways over time, so that it depended directly an evenly on the “x” (or “time”) variable.

For example, if a population of roaches was made not to mate, it would become a controlled population and would be easier to get rid of than if more and more roaches kept having more and more baby roaches.